A STUDY OF CRITICAL THINKING SKILLS AND SELF MANAGEMENT COMPETENCE IN RELATION TO PROFESSIONAL LEARNING AMONG PROSPECTIVE TEACHERS OF SECONDARY SCHOOLS

माध्यमिक विद्यालयों के भावी अध्यापकों में समालोचनात्मक चिंतन कौशल एवं आत्म प्रबंधन दक्षताओं का व्यावसायिक अधिगम के संबंध में अध्ययन

A
SYNOPSIS
SUBMITTED TO THE
MAHARSHI DAYANAND SARASWATI UNIVERSITY,
AJMER
FOR THE DEGREE
OF
DOCTOR OF PHILOSOPHY
IN
EDUCATION

BY
Manisha Agarwal

UNDER THE GUIDANCE OF

Dr. Nagendra Singh
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REGIONAL INSTITUTE OF EDUCATION, AJMER

2016

CERTIFICATE BY SUPERVISOR

Certified that:-

1. I am willing to guide the research work of **Ms. Manisha Agarwal** on the above subject if she registered for Ph.D.
2. To the best of my knowledge the subject selected has not been studied so far in any university.
3. The subject is of sufficient scope to keep the candidate engaged for two years.
4. The subject will lead to a valuable contribution. I have seen and approved the outline and bibliography, etc. submitted by the candidate.
5. Necessary facilities are available in the department for the above research work (Certificate from Principal/Head University Department with regards to facilities available is enclosed).
6. I have ..... research candidate registered under my supervision and the serial no. of this candidate whose application being forwarded for registration is .....
7. The candidate is not a close relation (the term close relation is defined in examination ordinance of the university).

Signature of the Supervisor with date

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Certified that the available facilities will be extended to Ms. Manisha Agarwal for research work if she registered for Ph.D.

Signature of Principal/Director
of the Institute with date

प्राचार्य
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क्षे. शि. सं. अजमेर
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APPENDIX-IV
Format for outline of Proposed Research Work
(To be supplied in four copies)

1. Name of scholar : MANISHA AGARWAL
(In English)
(In Hindi) : मनीषा अग्रवाल

2. Title of Research Work :
(In English) : "A STUDY OF CRITICAL THINKING SKILLS AND SELF MANAGEMENT COMPETENCE IN RELATION TO PROFESSIONAL LEARNING AMONG PROSPECTIVE TEACHERS OF SECONDARY SCHOOLS"
(In Hindi) : "माध्यमिक विद्यालयों के भावी अध्यापकों में समालोचनात्मक, चिंतन कौशल एवं आत्म प्रबंधन दक्षताओं का व्यावसायिक अधिगम के संबंध में अध्ययन

3. Location : **Department of Education RIE, Ajmer**

4. Importance of proposed investigation, objectives : **Annexure-1**

5. Review of work already done on the Subject of proposed research study. : **Annexure-2**

6. Research gaps identified in the proposed field of investigation. : **Annexure-3**

7. Major hypothesis, if any : **Annexure-4**

8. Material and methods/research methodology.: **Annexure- 5**

9. Bibliography : **Annexure - 6**

:

Annexure-I

INTRODUCTION AND IMPORTANCE OF THE RESEARCH

The promises of teachers' capacity and competence building for sustainable improvement and to achieve clearly defined outcomes lie in teachers' professional learning. Teachers' professional learning is the process whereby teachers develop and refresh skills capabilities and knowledge throughout their professional carriers. The focus of teachers' professional learning is teachers' development to minimize the complexities of teaching profession. Professional learning is an ongoing career long process for continuous improvement and reflection on their professional knowledge and effectiveness of their teaching and learning. A teachers' professional learning is an ongoing process of inquiry into and reflection on their practice, punctuated by learning activities and programs designed to enhance their professional knowledge skills and attitudes. Every teacher require a broad repertoire of skills and knowledge including a deep understanding of content and how student learn and think.

The present shift is education from an emphasis on teaching to an emphasis on learning. How the focus is on the learner, their needs, interest and aspirations. This has demanded increased teacher knowledge and teacher learning. There is need to encourage different approaches to teaching and learning and new relationships between students and teachers. The need has been further increased to understand the ways in which teachers come to learn adapt and make such new approaches a reality.

Darling – Hammond and McLaughlin (1995) Winter 'The vision of practice that underlies the nations reform agenda requires most teachers to rethink their own practice to construct new classroom roles and

expectations about students outcomes, and to teach in ways they have never thought before. 'This notion rests on the premise of improving student learning by improving teachers and teaching practices. Thus in teachers professional learning, Teachers' are as enquiring professionals who are both committed to ongoing self-evaluation and are supported by and engage in mentoring relationship with others. To be successful in a changing and increasingly complex world it is the need that whole school committees have to work and learn together to take charge of change finding best ways to enhance students learning.

Teachers' professional learning is an active experimental process through which knowledge is enacted, constructed and revised. There is also a role for conceptual inputs which may provide stimulus for different actions including different pedagogical thinking and different professional discussions. Teachers professional learning is an interplay between the professional and personal the individual and social the objective and subjective the situated and generalized. The present research problem has been attempted to study to improve the quality of teaching and learning in the schools. To conceptualized the need to invest in the learning of teachers to support the growth of the individual as well as contribute to the realization of the goals and priorities of school and the education system at secondary level.

OBJECTIVES

The study has been proposed to achieve following objectives :

1 To study the critical thinking skills of prospective secondary school teachers as :

a. Interpretation

b. Analysis

c. Evaluation
d. Inference
e. Explanation
f. Self regulation

2 To study the self-management competence of prospective teachers of secondary schools on following sub-competencies :

a. Emotional self-control
b. Trustworthiness
c. Conscientiousness
d. Adaptability
e. Achievement orientation
f. Initiative

3 To study the professional learning of prospective teachers of secondary schools on following dimensions :

a. Knowledge
b. Skills
c. Dispositions

4. To visualize the effect of following prospective teachers' variables on critical thinking skills, self management competence and professional learning.

a. Prospective teachers of government institutions and private institutions
b. Gender of prospective teachers
c. Geographical location of prospective teachers
d. Teaching subject of prospective teachers
e. Academic qualification of prospective teachers'
f. Educational gap in teacher education.

g. Year level of teacher education.

6, To visualize the relationship between critical thinking skills, self management competence and professional learning among prospective teachers of secondary schools.

7. To study the effect of levels of critical thinking skills and levels of self management competence on professional learning among prospective teachers of secondary schools.

REVIEW OF WORK ALREADY DONE ON THE SUBJECT OF PROPOSED RESEARCH STUDY.

Literature Related To Professional Learning Skills And Its Correlates

Drucker (1992)

Professional learning is what teachers engage in the stimulate their thinking and professional knowledge and to ensure that their practice is critically informed and up-to-date. We believe that by undertaking a wide range of high-quality, sustained professional learning experiences teachers are more likely to inspire pupils and provide high quality teaching and learning experiences enabling learners to achieve their best. It is important that professional learning provides rich opportunities for teachers to develop and enhance their professional knowledge and practice in order to progress the quality of learning and teaching and school improvement.

Professional learning is a powerful tool to organizational improvement. **Drucker (1992)** stated, "Every enterprise has to become a learning institution and a teaching institution. Organizations that build in continuous learning in jobs will dominate the twenty-first century"

Schmoker (1999) strongly suggested that the use of professional learning communities was the best, least expensive, most professionally rewarding way to improve schools. Evidence showed that effective professional development needs to be seen as a regular, on-going part of school life.

PLCs are distinguished by their emphasis on group or collective learning. King and Newmann (2001, p. 89) highlight the link between the individual and the collective:

To be sure, high quality instruction depends upon the competence and attitudes of each individual teacher. But in addition, teachers' individual knowledge, skills and dispositions must be put to use in an organized, collective enterprise. That is, social resources must be cultivated, and the desired vision for social resources within a school can be summarized as professional community.

Hargreaves and Giles (2003) do not distinguish between networked learning communities and PLCs in describing how a strong PLC:

..brings together the knowledge, skills and dispositions of teachers in a school or across schools to promote shared learning and improvement. A strong professional learning community is a social process for turning information into knowledge.

Valeri R. Helterbran (2005) pointed to the educators have not fully defined the role of utilizing lifelong learning as a guiding principle. Furthermore, district provided professional development is often deemed so inadequate that new teachers enter a profession where they, by necessity, must create their own professional growth opportunities. Novices are encouraged to examine their own lifelong learning quotient, initiate a dialog on the tenets of lifelong learning, and set a plan of action so that attitudes and skills associated with lifelong learning are furthered in themselves and inculcated in their students.

Peter Knight, Jo Tail, Mantz Yorke (2006) the educational professional development is a global concern. It is often characterized by event-delivery methods, though there are signs that other approaches are gaining favor. The authors stress the significance of non-formal learning, and the ways in which it can be promoted and enhanced within the activity

systems within which teachers in higher education work. Their argument is complemented by findings from a study of 2401 part-time teachers, and online responses from 248 full-time staff, in the UK Open University. Twelve implications for international practice are identified.

Research studies in the last decade have supported professional development as having a powerful impact on teaching quality and student achievement. For example,

Yoon, Duncan, Lee, Scarloss, and Shapley (2007) found that student achievement increased 21 percentile points in a single year when teachers had an average of 49 hours of professional development in a year when the focus was specifically on the curriculum they taught. Other researchers have found similar results (Garet, Birman, Porter, Desimone, & Herman, 1999; Cohen & Hill, 2001).

Chris Dede, Dian Jass Ketelhut, Pamela Whitehouse, Lisa Breit, Erin McCloskey (2008) highlights Online Teacher Professional Development (oTPD) areas in need of research based on a review of current oTPD research conducted in conjunction with an oTPD conference held at Harvard University in fall 2005. The literature review of this field documents much work that is anecdotal, describing professional development programs or lessons learned" without providing full details of the participants, setting, research questions, methods of data collection, or analytic strategies. Until more rigorous oTPD research is conducted, developers are hard pressed to know the best design features to include, educators remain uninformed about which program will help support teacher change and student learning, and funders lack sufficient guidelines for where to direct their support. The authors believe that the recommendations in this article for a research agenda will guide oTPD

scholarship toward evidence based conceptual framework that provides robust explanatory power for theory and model building.

Graham Stoop (2009)

Professional learning is a broader concept that refers to what teachers have gained (actually learnt) from their formal professional development, while acknowledging that teachers also acquire knowledge and understanding in informal ways. Teachers get better at teaching through various formal and informal forms of feedback, discussion, reflection and action. The phrase *Professional Learning and Development* captures this complexity and reflects the diverse ways in which teachers develop their skills, abilities and approaches for the benefit of students.

Doe, Tina (2010)

'There is an expressed need for education initiatives that address issues concerning teacher practice and professional learning. Currently there is an absence of professional learning programs that enhance teacher practice for the 21st Century. This research concerns the design and development of a teacher Professional Learning Program (PLP) using a partnership approach. The research was framed through a case study that utilized surveys, focus groups and in depth interviews. A research design comprised of three phases resulted in a PLP that evolved specific to identified teacher practical professional learning needs."

Mary Chandler, Tak Cheung Chan (2012) professional learning is considered important for improving teacher quality and for development of organizational capacity to boost school improvement for student learning. This mixed methodology study examines the implementation of the National Staff Development Council Standards (NSDC) in professional learning in Georgia schools through the NSDC Standards Assessment

Instrument and six open-ended follow-up questions. The findings suggest that teachers in Georgia did not perceive that professional learning holds a high priority by their school leaders, state legislators, and key policy makers. However, they rated their effort toward context and content areas of professional learning to be above average.

Debbie De Neve , Geert Devos, Melissa Tuytens (2015)

Professional learning in Differentiated Instruction (DI) is a challenging learning process for beginning teachers. This study investigates the interplay between job (i.e., teacher autonomy and characteristics of professional learning communities (PLCs)) and personal resources (i.e., teacher self-efficacy) as hypothesized determinants of professionalization in DI. A sample of 227 beginning teachers from 65 primary schools participated. Path analyses showed that the PLC-characteristic 'reflective dialogue', teachers' self-efficacy and autonomy directly predicted self-reported changes in DI-practice (i.e., measure of professional learning). Moreover, autonomy and the PLC-characteristic 'collective responsibility' indirectly predicted self-reported changes in DI-practice via self-efficacy. Implications for educational practices are discussed.

LITERATURE RELATED TO CRITICAL THINKING SKILLS AND ITS CORRELATES

Critical thinking means testing everything that is seen heard or read on the touch stone of rationality before believing. It means ability to look at a problem from all the angles to find the most appropriate solution. It also means not being swayed by biases and prejudices while considering conflicting points of view and confronting contrary opinions but being able

whole-heartedly to give credit to the opinion or point of view supported by the most cogent arguments or evidences.

King, Patrica M., Philip K. Wood and Robert A Mines (1990) describe several developments in the conceptualism of critical thinking. They also report the results of a study that investigated differences in critical thinking using multiple resources that reflect different definitions of the construct.

In the end the study concludes, that to increase the usefulness and quality of research on critical thinking, there is need of a clearly defined construct, specification of the desired degree of problem structure and instruments that reflect these elements.

Mckown, Major Lyndon Kyle (1997) studied Air Force's Air Command and Staff College's (ACSC) success at fulfilling its goal of fostering critical thinking. Along the way it answers four salient questions concerning critical thinking first, why critical thinking is so vitally important for leaders today the world's rapidly changing contextual factors and turbulent environment dictates that critical thinking be a necessary characteristic in leadership development. Secondly, the problem with defining exactly what is meant by the term critical thinking; The lack of a consensus on a precise definition is overcome by synthesizing a definition that contributes to the solution of the two remaining questions: how to assess critical thinking and how is critical thinking fostered? A number of different evaluation techniques are analyzed with the conclusion that the Watson-Glaser Appraisal combines the best combination of validity, reliability and ease of use. Four instructional techniques are also evaluated with current research literature suggesting a more explicit teaching approach (infusion) might be beneficial for ACSC. A critical analysis of

the current program indicates that although critical thinking is being fostered, effectiveness and efficiency cannot be determined with the descriptive evaluation data presently available; this deficiency could be eliminated with the use of the Watson-Glaser appraisal.

Hongladarom, Soraj (1998), in this research paper, is trying to find out whether there is any validity in the expressions of the western thinkers according to whom critical thinking is alien to Asian society and only a part of western culture.

With the help of many examples author tries to show how critical and logical thinking was very prevalent in ancient India and China. So critical thinking is not divergent to Asian culture. It only lost its place in Asian culture, because Asian culture chose to move towards a path of spiritualism instead of materialism and scientific advancement.

But in today's world there is a need to bring back critical thinking practices to the forefront and again make them an integral part of Asian culture. This would be possible if people don't see critical thinking antithetical to their cultural practices and make efforts to collaborate them with their prevalent cultural practices, as only those cultures survive which are flexible and adaptive enough to effect substantial changes for the future.

Bailin, Sharon, Roland Case, Jerrold R. Coombs and Leroi B. Daniels (1999) wrote two papers dealing with critical thinking. In the first of the two papers, they analyzed three widely-held conceptions of critical thinking: as one or more skills, as mental processes, and assets of procedures. Each view is, they contended, wrong-headed, misleading or, at best, unhelpful. Apart from the errors or inadequacies of the conceptions themselves, they promote or abet misconceived practices for teaching

critical thinking. They also refute the view that critical thinking is best taught by practising it. They have offered alternative proposals for the teaching of critical thinking.

In the second of the two papers, they set out a conception of critical thinking that critical thinking is a normative enterprise in which, to a greater or lesser degree, we apply appropriate criteria and standards to what we or others say, do, or write. The expression "critical thinking' is a normative term. Those who become critical thinkers acquire such intellectual resources as background knowledge, operational knowledge of appropriate standards, knowledge of key concepts, possession of effective heuristics, and of certain vital habits of mind. They explained why these intellectual resources are needed and suggested that critical thinking can be best taught by infusing it within any curricular practice in which students are involved.

Reid, Helen (2000) explored the correlation between California Critical Thinking Skills Test scores and Arnett Critical Thinking Outcome Evaluation scores of associate degree nursing students in this study to determine if there was evidence of concurrent validity between the two instruments. These tests, a general critical thinking skills test and a discipline specific critical thinking test, were based on the same definition of critical thinking. A secondary purpose of this study was to determine if any of several variables may be associated with critical thinking scores for associate degree nursing students.

The results were, there is limited concurrent validity between the CCTST, a general critical thinking skills test, and the Arnett CTOE, a discipline specific critical thinking test. 2) GPA is the only statistically valid predictor of critical thinking scores on a general critical thinking

skills test and a discipline specific skills test for ADN students. 3) Neither the CCTST or the CTOE should be used alone as a single measure of critical thinking in ADN students.

Kelly-Riley, Diane, Gary Brown, Bill Conlon Richard Law (2001) worked on a project funded by the U S Department of Education to integrate assessment with instruction in order to increase coherence and promote higher order thinking in courses across universities, in which Washington state Universities' various departments campus writing programs , general education program, and center for teaching, learning and technology collaborated to construct a critical thinking rubric. They constructed a seven-dimension critical thinking rubric. And used the rubric as an instructional guide, and as an evaluative tool using a 6 point scale for evaluation combining holistic scoring methodology with expert-rater methodology.

From various studies it was found out that students critical thinking scores increased three and a half times as much in a course that overtly integrated the rubric into instructional expectations, compared with performance in a course that did not. And that the students' critical thinking scores improved more in one semester in those courses than students not in those courses demonstrate in the two years from freshman to their junior year. The rubric also proved useful as a diagnostic tool for faculty in evaluating their own practices and testing the outcomes of different approaches objectively.

Bailin, Sharon (2002) in a paper examined some of the misconceptions about the nature of critical thinking on which many efforts to foster critical thinking in science rest, in particular the characterization of critical thinking in terms of processes or skills and the separation of

critical thinking and knowledge. She offered, in her view, a more philosophically sound and justifiable conception of critical thinking, and demonstrated how this conception could be used to ground science education practice.

Passi, Kush (2003) in this paper examined the topic of critical thinking in light of Maharshi Vedic science and how critical thinking could be implemented in the classroom. He defined critical thinking as, "thinking that is complete due to fulfillment of various elements of reasoning and ultimately leads to an increase in the quality of thinking through self-referral process of self-regulation." According to him self-referral performance is the first principle of action.

Murphy, Elizabeth (2004) reported on the creation of an instrument for use by instructors, students, or researchers to identify measure or promote critical thinking (CT) in online asynchronous discussions (OADs). Four models of CT were reviewed, synthesized, analyzed, and evaluated to clarify the construct. Indicators of specific cognitive processes related to CT were identified, and subsequently retained, rejected or modified to show how the construct might be operationalized in real contexts of use. Subsequent empirical testing of the instrument for the analysis of a transcript of an OAD revealed that while the instrument was valuable in identifying and measuring CT in the OAD, issues of practicality needed to be addressed.

Halvorsen, Andy (2005) wrote this article for teachers of English where English is taught as a second language or foreign language. In this article she described what is really meant by Critical Thinking and how it makes classes better. She also introduced three classroom techniques for incorporating critical thinking- debate, media analysis and problem solving.

Richardson, Jennifer C., et al. (2006) sought to evaluate the effectiveness of a peer feedback strategy in asynchronous online discussions through a study. Specifically, this exploratory study examined the impact of peer feedback in online discussions on students' perceived and actual critical thinking skills in terms of receiving and providing peer feedback Participant interviews and pre and post surveys targeting critical thinking skills were utilized in a mixed method study approach.

Results indicate that participants perceived the peer feedback strategy as having impacted their learning at a higher cognitive level.

Monash University (2007) conducted a study of first year second-semester undergraduate students of philosophy course in critical thinking. It was conducted to find out relationship between open-minded thinking dispositions and critical thinking skills.

Findings were that the actively open-minded thinking attitudes were correlated with critical thinking ability and, gains in critical thinking positively affected open minded thinking dispositions and vice versa.

Friedel, Curtis, Maue Gallo, Erin Eckharett (2008) conducted a study to assess if overtly teaching for critical thinking, as a teaching method, contributed to explaining increases in critical thinking skill scores of undergraduate students enrolled in agricultural biotechnology. One group of students were taught components of critical thinking and then asked to use the newly learned skills in class. A nonequivalent control group was instructed using the inquiry based teaching method. The data exhibited significance between groups giving evidence that overtly teaching for critical thinking improves students' critical thinking skills as opposed to using the inquiry-based teaching method.

Ciascai, Liliana and Lavinia Haiduc (2009) investigated, in order to identify the references to the concept of critical thinking, a number of 56 Romanian school science curricula available on the site of the Ministry of Education, Research and Innovation. The analysis has been made on two levels. The first level of analysis was the terminology level and the second level was the level of the critical thinking skills. The results show that the terminological entries (critical thinking, critical analysis, criticism etc.) are poor and the critical thinking skills are disproportionately represented in the curricula of the primary and secondary science education. The results presented in this study revealed that critical thinking is not a real concern for the authors of the Romanian science school curricula.

Dugar, Dr. Paritosh Chandra (2010) defined critical and creative thinking and also their importance in TESL (Teaching English as Second Language) context. The author also tried to establish with the help of two experiments that questioning as a method is useful in stimulating critical and creative thinking in students. And critical and creative thinking in their turn enhance the efficacy of TESL (Teaching English as Second Language) and learning of L2 (Second Language).

Bodeeb, Julia (2011) suggested two activities that would be helpful in honing the critical thinking skills of the students. One is developing the tendency to question everything. Students should be taught not to take everything lying down instead they should question everything to determine the true facts from opinionated statements. The second is conducting debates so that they could learn to think about things from different viewpoints and also to express their views in a rational manner.

Ozkahraman, Siikran and Belgin Yildirim (2012) defined and evaluated in a university hospital of nurses working in The California

Critical Thinking Disposition Inventory (CCTDI) related factors. The sample size was 323 nurses who volunteered to participate in the study. Socio demographic features data form and CCTDI, were used as data collection tools. Results were total score means are examined, it is seen that the score mean obtained by the nurses was at low level.

LITERATURE RELATED TO SELF-MANAGEMENT COMPETENCE AND ITS CORRELATES

'Self management represents the process by which individuals actively apply a set of cognitive and behavioural strategies to guide their goal directed activities over time and across changing environment.'

'Self management refers to the strategies by which individuals can effectively direct their own activities towards the achievement of objectives and includes goal setting decision making, focusing planning, scheduling task-tracking self-control, self-evaluation, self-intervention, self–development etc.'

Bernotavicz, Freda (1995) conducted a study of child care teachers to identify the job responsibilities and competencies needed for effective performance, which resulted in a competency model. In this competency model self-management competencies are given an important position. The competencies included in self-management competencies are :

a. Ability to maintain own equilibrium
b. Sets limits and boundaries |
c. Self-awareness and self-development

Cheung, Wing-Ming and Yin Cheong Cheng (1997) proposed a framework of teacher self-management and drew implications for teacher training. Teacher self-management is a continuous process comprising two self-propelling cycles. The major cycle consists of five sequential stages, in

which teachers as strategic actors will be aware of the changing education environment and able to readjust their personal goals and action plans to meet emerging challenges. The support cycle facilitates action learning in various stages of the major cycle. Practicing in the major and support cycles, teachers may develop the necessary self-renewal and competence for ensuring the quality of their professional work in the changing environment. From this conception of self-management, the traditional staff development practice in school can be re-engineered to maximize opportunities for facilitating teachers' self-management and self-learning.

Harold, Barbar (1999) reported the findings from a new study of seven diverse schools, which was specifically designed to explore both multiple and cumulative aspects of a decade of school reform in New Zealand. The study was a qualitative one which employed wide-ranging interviews with teachers, senior staff and members of the schools' governing body.

This paper focuses on those findings relating to the impact of self-management on aspects of school policy and practice such as, the roles of the principal, teachers and students, teaching and learning, school-community relationships, and on education of Maaori children. The paper outlines how educational debate and policy in and across these areas is actually being interpreted and translated into practice by those in various roles within schools.

Dalton, Tina, Ronald C. Martella and Nancy E.Marchand-Martella (1999) taught two adolescents with learning disabilities to use a self-management program to decrease off-task behavior in two general education classes and a study hall class. The self-management program included three components—a checklist, a behavior rating scale, and a self-

monitoring form. The findings indicated that the self-management program was successful in all three settings in decreasing off-task behaviors. Additionally, the teacher ratings of student behavior were found to increase during self-monitoring, suggesting the overall behavior of the students improved during the self-management program.

Bapat, Ashwini, et.al (2004) provided a detailed model of leadership to aid in the development of leaders. It describes competencies of leadership. Five dimensions of leadership competency are described - (i) Self-management (ii) Heeding others (iii) Task management (iv) Innovation (v) Social responsibility.

Self management dimension is equated with knowing own values, strengths and limitations and being able to control emotions and behaviours. The core competencies included in self-management are - work habits, work attitudes, learning, self-insight and stress-management.

Xue, Gang and Xiaomin Sun (2005) developed a conceptual model of self-managing team (SMT) service climate, taking into account characteristics of the organizational context, the SMT, and the individual employee. In order to assess the impact of SMT service climate, they included a number of internal consequences (i.e., in-company performance data) and external service performance outcomes (i.e., customer-perceived service quality). As a result of the hierarchically nested data-structure (i.e., groups and individuals), they investigated the antecedents of SMT service climate in service groups using a multi-level approach. Their results revealed that organizational and group factors have a significant cross-level influence on individual employee perceptions of SMT service climate. Furthermore, they demonstrated that employee perceptions of SMT service

climate are positively related to customer-perceived service quality, while there is no relationship with service productivity measures. ;

Heskett, James (2006) went beyond the obvious-looking benefit of self management in business to look if there is sufficiently capable entry - level task force to make self-management a success and also if the top level management has positive attitude towards this kind of practice because both of these are necessary conditions if self-management has to succeed.

Tomal, Daniel R (2008) described a Leadership Capability Model which is designed to help teachers understand their leadership style in motivating their students. The model illustrates four types of leaders based upon the degree of a person's level of competence, confidence, and self management. The four leadership types consist of the obnoxious leader, the timid leader, the incapable leader, and the capable leader. Self-management refers to the educator's degree of experience, knowledge, and skills as a leader. Self-management can be viewed as how "seasoned" the educator is in motivating students. Self-management goes beyond only being competent or confident and includes the quality of experience and fortitude in applying both confidence and competence in leadership.

Management Expert (2010) defined self-management skills from business perspective and gave a list of them. Self-management is defined as the control you exert over your time, your achievement and your personal growth. It is a collection of management skills that sit alongside team management skills and leadership skills. Self-management skills list :-

a. Time management skills

b. Project management skills

c. Emotional control

d. Discipline

e. Calmness

Adhia, Hasmukh (2011) described self-management as an internet process of managing one's body, thoughts, intellect, emotions and spirit. According to author, Yoga helps in self-management by getting control over negative emotions. The basis of Yoga lies in Taitriya Upanishad, which states that human personality, consists of five layers called 'Pancha Kosha' - the gross physical body that we have. The next layer is, 'Pranmaya Kosha' - a layer of Prana in and around our body. Prana is a subtle form of energy, which is flowing in 72 lakh 'Nadis' of our body. The third is 'Manomaya Kosha' - the layer of mind. Mana (emotional mind) and Chit (subconscious mind) are part of Manomaya Kosha. The fourth layer 'Vigyanmaya Kosha' is formed of Buddhi (intellect) and Ahankar (ego). It is a layer of our convictions and beliefs in life which is the result of our discriminating faculty. 'Fifth Kosha' is Anandmaya Kosha - a layer of bliss all around us. The true happiness lies in Anandmaya Kosha.

The purpose of Yoga is to transcend our existence from Annamaya Kosha (i.e. gross physical level to Anandmaya Kosha, spiritual bliss level) and beyond.

The above presentation of available researches on critical thinking skills and self management competence and professional learning has been presented to develop the research prospective and needed research on the selected variables in the proposed study.

Research gaps identified in the proposed field of investigation.

The review of related literature on teachers' critical thinking skills, self-management competence and professional learning has created the need to conduct research and generate empirical evidence on above dimensions of teachers' professional development and effective working in the secondary schools. There is need to have evidences from a diverse range of sources including observations, information and data and people's views. The researches on critical thinking skills have used varied samples and failed to conclude about critical thinking of teachers who are working in secondary schools. Cheung et al (1997) conducted the research on critical thinking skills and drew implications for teacher's training. They have conducted that teachers' self management is a continuous process comprising two self propelling cycles. Xue and Xiaomin (2005) developed a conceptual modes of self managing team. Scars and Margaret (2006) collaborated with teachers for design and implementation of self-management instructions in the schools. Linaman, Danial (2011) has conducted to have self management in employees to be more productive. Hence, the researches on self-management have established the importance of self management among the employees in an organization and generated the need to conduct the research on self management. The researches on critical thinking have highlighted the importance of their skills in learning. Thus, the critical thinking skills and self management competence (Daniel Goleman (1998, 2004) is important for individuals in deciding their professional growth and professional competence.

Learning is not just about taking in information provided by someone it is about questioning that information and putting it to work. Researches on professional learning have considered it important for improving teacher quality and for development of organizational capacity for effective schools. Teaching is the major responsibility of a teacher, learning plays an important role in the support of teaching. There is need to implement professional learning of teachers in schools. Goldring et.al. (2007) illustrated the outcomes of school professional learning communities and stressed the need for assessment. The review of available literature shows that there are few empirical studies on professional learning of teachers in school education. Professional learning is an important area that contributes to student learning. Therefore, many efforts have to be exerted to investigate the many unknown of professional learning its status and effectiveness. The study will assist the education system - teacher education to evaluate present professional learning and plan for improvement strategies to help both teachers and student learning.

Major hypothesis of the study

Following hypothesis will be tested in the proposed research work to meet the objectives of the research :

1) The prospective teachers of secondary school have average level of critical thinking skills on :
   (i) Interpretation
   (ii) Analysis
   (iii) Evaluation
   (iv) Inference
   (v) Explanation
   (vi) Self-regulation
2) There is no significant difference between prospective teachers of government institutions and prospective teachers of private institutions on critical thinking skills.
3) Gender of prospective teachers of secondary school has no significant effect on critical thinking skills.
4) There is no significant difference between prospective teachers of rural background and prospective teachers of urban background on critical thinking skills.
5) Level of academic qualification of prospective teachers of secondary schools have no significant effect on critical thinking skills.
6) Educational gap in teacher education programme have no significant effect on critical thinking skills.
7) There is no significant difference between prospective teachers of I year B.Ed. course and prospective teachers of II year B.Ed. course on critical thinking skills.

8) The prospective teachers of secondary schools have average level of self-management competence and its following sub competencies

   (i) Emotional self control
   (ii) Trustworthiness
   (iii) Conscientiousness
   (iv) Adaptability
   (v) Achievement orientation
   (vi) Initiative

9) There is no significant difference between prospective teachers of government institutions and prospective teachers of private institutions on self management competence.

10) Gender of prospective teachers of secondary school has no significant effect on self management competence.

11) There is no significant difference between prospective teachers of rural background and prospective teachers of urban background on self management competence.

12) Level of academic qualification of prospective teachers of secondary school, have no significant effect on self management competence.

13) Educational gap is teacher-education programme have no significant effect on self management competence.

14) There is no significant difference between prospective teachers of I Year B.Ed. course and prospective teachers of II year B.Ed. course on self management competence.

15) There is significant development of professional learning among prospective teachers of secondary schools on following dimensions :

   a) Knowledge
   b) Skills

c) Dispositions

16) There is no significant difference between prospective teachers of government institutions and prospective teachers of private institutions on professional learning and its dimensions.

17) Gender of prospective teachers of secondary school has no significant effect on professional learning and its dimension.

18) There is no significant difference between prospective teachers of rural background and prospective teachers of urban background on professional learning and its dimension.

19) Level of academic qualification of prospective teachers of secondary schools has no significant effect on professional learning and its dimension.

20) Education gap in teacher education programme have no significant effect on professional learning and its dimension.

21) There is no significant difference between prospective teachers of I Year B.Ed. course and Prospective teachers of IInd year B.Ed. course on professional learning and its dimension.

22) There is no significant relationship between critical thinking skills, self management competence and professional learning of prospective teachers of secondary schools.

23) There is no significant effect of critical thinking skills, self management competence on professional learning of prospective teachers of secondary schools.

Annexure- 5

Material and methods/research methodology

Material/Tools : Following tools to be used to meet the objectives of the present research work.

- Critical Thinking Skills Scale (Ranjana Nambiar)
- Self-management competence Inventory (Daniel Golmen)
- Professional learning (will be developed in the proposed Research work)

Methods

In present research, researcher has planned to use Descriptive Survey Method

Variable

Following variables have been use in the proposed research work.

Independent Variable

Prospective Teachers of Secondary school and their characteristics.

Dependent variable

Critical Thinking Skills

Self-management Competencies

Professional learning

Sample of the Research work:

The stratified random sampling procedure will be used to have a sample of 640 prospective teachers of secondary schools.

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